Amendmentstotheclaims

1. (Currently amended) A relational database management system for storing and analyzing network data stored in relational tables that describe a set of nodes and links forming a network wherein each of said nodes represents an object of interest and each of said links represents a relationship between two of said nodes, said system comprising, in combination:

a generic node table containing a plurality of node table rows each of which contains data describing a given node in said set of nodes ~~network~~,

a generic link table containing a plurality of link table rows each of which contains data describing a link between two nodes in said set of nodes ~~network~~ and further identifying the two node table rows in said generic node table that contain data describing each of said two nodes, and

an application program interface which enables external executing application programs to create said generic node table and said generic link table, to store data describing nodes in said generic node table, to store data describing links between said nodes in said generic link table, and to perform a plurality of standard operations on the data in said generic node table and said generic link table.

2. (Original) A relational database management system for storing and analyzing network data as set forth in claim 1 wherein said network is a logical network.

3. (Original) A relational database management system for storing and analyzing network data as set forth in claim 1 wherein each of said node table rows contains data specifying a node cost attribute associated with said given node and wherein each of said link table rows further contains a link cost attribute associated with a link.

4. (Previously presented) A relational database management system for storing and analyzing network data as set forth in claim 3 wherein said standard operations include at least one path identification procedure for analyzing the said network data to identify a particular path having one or more stated cost characteristics.

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5. (Original) A relational database management system for storing and analyzing network data as set forth in claim 3 wherein said standard operations include at least minimum cost path identification procedure for analyzing the said network data to identify the path that has the minimum total cost from a stated start node to a stated end node.

6. (Original) A relational database management system for storing and analyzing network data as set forth in claim 1 wherein said standard operations include analyzing said network data to identify a path consisting of an alternating sequence of nodes and links having defined characteristics.

7. (Original) A relational database management system for storing and analyzing network data as set forth in claim 1 wherein said system further includes a path table containing a plurality of path table rows each of which contains data describing a path consisting of an alternating sequence of nodes and links.

8. (Original) A relational database management system for storing and analyzing network data as set forth in claim 7 wherein said standard operations include at least one path identification procedure for analyzing said network data to identify a particular path having stated characteristics and for placing information describing said particular path in one of said path table rows.

9. (Currently amended) A relational database management system for storing and analyzing network data as set forth in claim 7 wherein said system further includes a path-link table containing one ordered set of path-link table rows associated with each given path described in said path table, each of said path-link table rows containing information identifying one link in the sequence of links in said given path.

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10. (Original) A relational database management system for storing and analyzing network data as set forth in claim 9 wherein said standard operations include at least one path identification procedure for analyzing said network data to identify a particular path having stated characteristics and for placing information describing said particular path in one of said path table rows and for placing information describing the sequence of links in said particular path in said path-link table.

11. (Currently amended) A relational database management system for storing and analyzing network data as set forth in claim 1 wherein said standard operations include loading node and link data into said generic node table and said generic link table[[s]] respectively from a database.

12. (Currently amended) A relational database management system for storing and analyzing network data as set forth in claim 1 wherein said network is a spatial network and wherein each of said node table rows includes a column for storing the identification of a geometry object which specifies an ordered sequence of vertices that are connected by straight line segments or circular arcs that define the shape and location of one of said nodes.

13. (Currently amended) A relational database management system for storing and analyzing network data as set forth in claim 12 wherein each of said link table rows includes a column for storing the identification of a geometry object which specifies an ordered sequence of vertices that are connected by straight line segments or circular arcs that define the geometry of one of said links.

14. (Currently amended) A relational database management system for storing and analyzing network data as set forth in claim 1 wherein each of said link table rows includes a column for storing the identification of a geometry object which specifies an ordered sequence of vertices that are connected by straight line segments or circular arcs that define the shape and location of one of said links.

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15. (Original) A relational database management system for storing and analyzing network data as set forth in claim 1 wherein each of said node table rows further contains a level column for holding a hierarchy level.

16. (Original) A relational database management system for storing and analyzing network data as set forth in claim 15 wherein each of said node table rows further contains a parent column for holding the identification of a parent node within the hierarchy established by said level column.

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